

Food marketing and fast food consumption among Australian secondary school students

Background

The National Secondary Students' Diet and Activity (NaSSDA) survey was established by Cancer Council Australia and the National Heart Foundation of Australia with the first data collection undertaken in 2009-10. The NaSSDA survey is designed to be a regular monitoring system in which to track Australian adolescents' body weight and dietary and physical activity behavior at both a state and national level. The 2012-13 NaSSDA survey has been jointly funded by state Cancer Councils through Cancer Council Australia, the National Heart Foundation of Australia, and the State and Territory Government Health Departments. This research memo reports on fast food consumption among Australian secondary school students and the impact of food marketing on this population group.

Methods

A nationally representative sample of 8,888 secondary school students in year levels 8 to 11, from 196 schools was surveyed in 2012-13. Data on students' dietary and physical activity behaviour were collected via a web-based survey. Anthropometric measurements of students' height, weight and waist circumference were taken by trained researchers, in a confidential setting. Active parental consent was required for students to participate in each component of the study. An audit of the school food and activity environment was also conducted.

Key indicators of food intake that are positively (vegetables and fruit) and negatively (fast food) associated with a healthy diet were measured using short diet questions developed by the NSW Centre for Public Health Nutrition for the purpose of population-based monitoring surveys.¹ These items have moderate to good validity and reliability among Australian children aged 10 to 12 years.² The aim of these questions was to describe the dietary habits of adolescents rather than provide a comprehensive assessment of their food and nutrient intake. Fast food consumption was assessed by asking "How often do you have meals or snacks such as burgers, pizza, chicken or chips from places like McDonalds, Hungry Jacks/Burger King, Pizza Hut, KFC, Red Rooster or local take away food places?" Students were also asked a series of questions to assess the potential influence of marketing on their food choices in the last month.

Data were analysed using Stata SE 12.1 and weighted by state, education sector, year level and sex to ensure the sample obtained reflected the population distribution.³ The clustering of students within each school was also adjusted for in all analyses. Logistic regression analyses were conducted to test for significant differences ($p < 0.01$) in proportions by sex, controlling for year level, body mass index (BMI), socio-economic position (SEP) and home location. A further logistic regression model investigated whether eating fast food at least once a week was associated with eating low daily amounts (one serve or less) of vegetables and fruit, respectively. Changes in prevalence estimates between survey years (2009-10 vs. 2012-13) were also assessed.

¹ Flood V, Webb K, Rangan A. Recommendations for short questions to assess food consumption in children for the NSW Health Surveys. NSW Centre for Public Health Nutrition: Sydney, Australia, 2005.

² Gwynn JD, Flood VM, D'Este CA, Attia JR, Turner N, Cochrane J et al. The reliability and validity of a short FFQ among Australian Aboriginal and Torres Strait Islander and non-Indigenous rural children. *Public Health Nutr* 2011; 14(3): 388-401.

³ Australian Bureau of Statistics. (2014). *Schools, Australia, 2013*. Catalogue No. 4221.0. Canberra: Australian Bureau of Statistics.

Results

As highlighted in Table 1, 40% percent of all students reported consuming fast food at least once a week. Male students were more likely than female students to report eating fast food on a weekly basis.

Table 1: Prevalence of consuming fast food at least once a week by sex, 2012-13

	Males (n=4,643)	Females (n=4,245)	All (n=8,888)
Consume fast food at least weekly	45.6%	33.7%*	40.1%

Note: N's vary among behavioural outcomes due to missing data.

* Significant difference at $p < 0.01$.

Students who reported eating fast food at least once a week were more likely than those that did not to indicate low daily consumption of vegetables (35% cf. 23%). A similar association was found between students reporting they eat fast food on a weekly basis and low fruit intake (32% cf. 23%).

As shown in Table 2, there was a small decrease in the prevalence of students' consuming fast food on a weekly basis in 2012-13 compared to the previous survey period.

Table 2: Trends over time in students' fast food consumption, 2009-10 to 2012-13

	Prevalence [†] (%)		Adj. OR [‡]	95% CI	P-value
	2009-10 (n=12,188)	2012-13 (n=8,888)			
Consume fast food at least weekly	43.3%	40.1%	0.85	0.76 – 0.96	0.007

Note: N's vary among behavioural outcomes within each survey wave due to missing data.

Abbreviations: OR = odds ratio; CI = confidence interval.

[†] Unadjusted prevalence estimates.

[‡] Adjusted for sex, year level, BMI category, SEP, home location and school-level clustering.

As presented in Table 3, just over half of all students had tried a new food or drink product in the last month that they had seen advertised. Around two-fifths of students had asked their parents/carers to buy a food or drink product they had seen advertised, while a similar proportion reported having bought an extra food or drink product on display at the supermarket checkout in the last month. Males were more likely than females to have been influenced by special offers at fast food outlets, food or drink products linked with a movie or sports personality, and competitions or prizes on snack foods or soft drinks in the previous month.

Table 3: Influence of marketing on food choices in the last month by sex

	Males (n=4,643)	Females (n=4,245)	All (n=8,888)
Try a new food or drink product that you had seen advertised	54.0%	51.3%	52.7%
Ask your parents / carers to buy a food or drink product that you had seen advertised	44.2%	43.3%	43.8%
Buy an extra food or drink product on display at the supermarket checkout	42.0%	38.9%	40.5%
Choose a fast food outlet because it had a special offer or giveaway with the meal	39.6%	29.5%*	34.9%
Choose a food or drink product (e.g. cereal) linked with a movie or sports personality you like	29.4%	18.5%*	24.3%
Choose a snack food or soft drink in order to enter a competition or win a prize	24.6%	15.1%*	20.2%

Note: N's vary among outcomes due to missing data.

* Significant sex difference at $p < 0.01$.

Summary

- Forty percent of students reported consuming fast food at least once a week, with this proportion higher among males (46% cf. 34%).
- While the prevalence of students' consuming fast food on a weekly basis decreased in 2012-13 compared to the previous survey period (43% cf. 40%), it still remains high overall.
- Students who reported eating fast food at least once a week were more likely to indicate low daily consumption of vegetables and fruit.
- Many students were prompted to try a new food or drink product (53%) or request their parents make such a purchase (44%) in response to seeing advertising.
- Males were more likely than females to have been influenced by marketing techniques including premium offers at fast food outlets (40% cf. 30%), product links with movie or sports personalities (29% cf. 19%), and competitions or prizes (25% cf. 15%), in the previous month.